

IN THE CLAIMS:

Please cancel claim 6 without prejudice or disclaimer. Please amend claims 1, 7, 8 and 29 as follows. A detailed listing of all claims is as follows.

Claim 1 (Currently Amended): A transflective liquid crystal display, comprising:

- upper and lower substrates facing into and spaced apart from each other, wherein the upper and lower substrates include a plurality of pixel regions that display images;
- a liquid crystal layer interposed between the upper and lower substrates, wherein the liquid crystal layer has a first adjusted thickness to compensate a residual optical retardation of incident light caused by anchored liquid crystals near an alignment layer when a maximum operation voltage is applied;
- an upper quarter wave plate (QWP) on the upper substrate, wherein the upper quarter wave plate has a second adjusted thickness to compensate the residual optical retardation caused by the liquid crystal layer when the maximum operation voltage is applied;
- an upper polarizer on the upper quarter wave plate;
- a transparent common electrode on a surface of the upper substrate facing into the lower substrate;
- a pixel electrode over a first surface of the lower substrate, wherein the pixel electrode corresponds to each pixel region, and the pixel electrode is divided into transparent and reflective portions;
- a lower quarter wave plate (QWP) on a second surface of the lower substrate;
- a lower polarizer below the lower quarter wave plate; and

a backlight device arranged to be adjacent to the lower polarizer, wherein the first adjusted thickness is $d+d_1$, where d is a normal thickness of the liquid crystal layer and d_1 is calculated using the following equation,

$$T = \sin^2 2\phi \sin^2 \left[\frac{\pi \cdot \Delta n \cdot d_1}{\lambda} \right],$$

where T is a value of transmittance when a maximum operation voltage is applied, ϕ is an angle between an optical axis of the liquid crystal layer and a transmissive axis of the polarizer, Δn is a birefringence of the liquid crystal layer.

Claim 2 (Original): The transflective liquid crystal display according to claim 1, wherein the transparent portion of the pixel electrode includes a transparent electrode being disposed on a surface of the lower substrate facing into the upper substrate.

Claim 3 (Original): The transflective liquid crystal display according to claim 2, further comprising a passivation layer on the transparent electrode.

Claim 4 (Original): The transflective liquid crystal display according to claim 3, wherein the reflective portion of the pixel electrode includes a reflective electrode.

Claim 5 (Original): The transflective liquid crystal display according to claim 4, wherein the reflective electrode is disposed on the passivation layer and has a transmitting hole in a central portion.

Claim 6 (Canceled).

Claim 7 (Currently Amended): The transflective liquid crystal display according to claim [[6]] 1, wherein ϕ is about 45 degrees.

Claim 8 (Currently Amended): A transflective liquid crystal display, comprising:
upper and lower substrates facing into and spaced apart from each other, wherein the
upper and lower substrates include a plurality of pixel regions that display images;
a liquid crystal layer interposed between the upper and lower substrates, wherein the
liquid crystal layer has a first adjusted thickness to compensate a residual optical retardation of
incident light caused by anchored liquid crystals near an alignment layer when a maximum
operation voltage is applied;
an upper quarter wave plate (QWP) on the upper substrate, wherein the upper quarter
wave plate has a second adjusted thickness to compensate the residual optical retardation caused
by the liquid crystal layer when the maximum operation voltage is applied;
an upper polarizer on the upper quarter wave plate;
a transparent common electrode on a surface of the upper substrate facing into the lower
substrate;
a pixel electrode over a first surface of the lower substrate, wherein the pixel electrode
corresponds to each pixel region, and the pixel electrode is divided into transparent and reflective
portions;
a lower quarter wave plate (QWP) on a second surface of the lower substrate;
a lower polarizer below the lower quarter wave plate; and

a backlight device arranged to be adjacent to the lower polarizer ~~The transflective liquid crystal display according to claim 1~~, wherein the second adjusted thickness of the upper QWP is $d + d_2$, where a normal thickness of the upper QWP is d and d_2 is calculated from the following equation,

$$T = \sin^2 2\phi \sin^2 \left[\frac{\pi \cdot \Delta n \cdot d_2}{\lambda} \right],$$

where T is a value of transmittance, ϕ is an angle between a slow axis of the upper QWP and a transmissive axis of the polarizer, Δn is a birefringence of the upper QWP.

Claim 9 (Original): The transflective liquid crystal display according to claim 8, wherein ϕ is about 45 degrees.

Claim 10 (Original): The transflective liquid crystal display according to claim 1, wherein a slow axis of the lower QWP is perpendicular to that of the upper QWP.

Claim 11 (Original): The transflective liquid crystal display according to claim 1, wherein the liquid crystal layer includes a homogeneous liquid crystal that is arranged in a vertical direction when a voltage is applied.

Claim 12 (Original): The transflective liquid crystal display according to claim 1, wherein the optical axis of the liquid crystal layer is parallel to the slow axis of the lower QWP.

Claims 13-28 (Canceled).

Claim 29 (Currently Amended): A transflective liquid crystal display, comprising:

- upper and lower substrates facing into and spaced apart from each other, wherein the upper and lower substrates include a plurality of pixel regions that display images;
- an upper quarter wave plate (QWP) on the upper substrate;
- an upper polarizer on the upper quarter wave plate;
- a lower quarter wave plate (QWP) below the lower substrate;
- a lower polarizer below the lower quarter wave plate;
- a backlight device arranged to be adjacent to the lower polarizer;
- a liquid crystal layer interposed between the upper and lower substrates;
- a transparent common electrode on a surface of the upper substrate facing into the lower substrate;
- an upper alignment layer between the transparent common electrode and the liquid crystal layer;
- a pixel electrode over the lower substrate, wherein the pixel electrode corresponds to each pixel region, and the pixel electrode is divided into transparent and reflective portions; and
- a lower alignment layer between the pixel electrode and the liquid crystal layer;

wherein a transmissive axis of the upper polarizer is perpendicular to a transmissive axis of the lower polarizer, a slow axis of the upper QWP is perpendicular to a slow axis of the lower QWP, the slow axis of the upper QWP forms an angle of 45° with the transmissive axis of the upper polarizer, an optical retardation of the upper QWP is $\lambda/4 + \alpha$, α ranges from zero to 100nm, and the slow axis of the lower QWP is parallel to an orientation direction of the liquid crystal

display layer, and wherein the first adjusted thickness is $d+d_1$, where d is a normal thickness of the liquid crystal layer and d_1 is calculated using the following equation,

$$T = \sin^2 2\phi \sin^2 \left[\frac{\pi \cdot \Delta n \cdot d_1}{\lambda} \right],$$

where T is a value of transmittance when a maximum operation voltage is applied, ϕ is an angle between an optical axis of the liquid crystal layer and a transmissive axis of the polarizer, Δn is a birefringence of the liquid crystal layer.

Claim 30 (Original): The transfective liquid crystal display according to claim 29, wherein an optical retardation of the liquid crystal layer is $\lambda/4+\alpha$.

Claim 31 (Withdrawn): The transfective liquid crystal display according to claim 29, wherein an optical retardation of the liquid crystal layer is different between transmissive and reflective portions, the optical retardation is $\lambda/4+\alpha$ in the reflective portion, the optical retardation is $\lambda/2+\beta$ in the transmissive portion, and β ranges from zero to 100nm.

Claim 32 (Original): The transfective liquid crystal display according to claim 29, wherein an optimum value of α for adjusting the optical retardation ranges from zero to 50nm.

Claim 33 (Withdrawn): The transfective liquid crystal display according to claim 31, wherein an optimum value of β for adjusting the optical retardation ranges from zero to 50nm.

Claims 34-39 (Canceled).